

PATENT SPECIFICATION



Application Date: Aug. 10, 1926. No. 19,678/26.

280,273

Complete Left: June 10, 1927.

Complete Accepted: Nov. 10, 1927.

PROVISIONAL SPECIFICATION.

An Improved Self-locking Nut for Bolts, Threaded Screws, and the like.

I, ARTHUR JOHN WIGGLESWORTH, of Crookes Broom, Hatfield, near Doncaster, in the County of York, British subject, do hereby declare the nature of this invention to be as follows:—

The figure in the accompanying drawing shews a section through the nut which has a bevelled end at A, the end which comes in contact with the working piece. A slot B of a width equal to the amount of bevel C

is cut into the body of the nut D from the outside of the nut to its centre. The locking is effected by slight distortion of the threads of the nut and those of the bolt or thread to which it is applied by the closing of the slot when the bevel comes in contact with the working piece.

Dated this 1st day of August, 1926.

A. J. WIGGLESWORTH.

COMPLETE SPECIFICATION.

An Improved Self-locking Nut for Bolts, Threaded Screws, and the like.

I, ARTHUR JOHN WIGGLESWORTH, a subject of the King of Great Britain, of Crookes Broom, Hatfield, near Doncaster, in the County of York, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to locknuts and has for its main object to provide a nut formed as a single unit and adapted to be screwed into position or removed from position in the usual manner, for example by an ordinary spanner, and which will not work loose under vibration.

The invention in general consists in providing in the material of the nut a slot cut from the outer edge thereof to the centre of the nut in a plane parallel to the top or bottom of the nut as the case may be and in bevelling the end of the nut on the exterior to a desired extent in such a manner that the part of the end surface furthest away from the bolt first comes in contact with the surface against which the nut is to take.

The width of the slot formed would be

equal to from one to one and a half screw threaded portions and the amount of bevel at the extreme end thereof equal to the width of the slot.

In the case of shallow nuts the slot may if so desired come substantially in the middle position between the two ends and in this case both ends of the nut may be bevelled to allow either end to come into action.

In order that the invention may be better understood it will now be described with reference to the accompanying drawing in which Figures 1, 2 and 3 show in front and sectional elevation and plan respectively one form of nut made according to the invention.

Figures 4, 5 and 6 show similar views of another form.

Referring to Figures 1, 2 and 3, 7 is the nut having one end 8 bevelled as shown the bevel commencing at one side of the nut and extending across the nut for its full width. 9 is the slot cut into the material of the nut from the outside of the nut to the centre of the nut. In a preferred construction of the

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nut three to four threads are left between the end 8 and the slot 9. In this case the upper face of the nut is made flat and chamfered in the usual manner.

5 A similar construction is shown in Figures 4, 5 and 6 except that the slot 9 comes midway between the two ends 8 and both ends of the nut are bevelled.

10 In action and application a nut is screwed on to a bolt in the usual manner the surface against which the bevelled end 8 makes contact causes a reaction which operates at right angles to the normal surface of contact and tends to turn the part of the nut at the bevelled end 8 about one or more
15 imaginary axes towards the bolt. This turning by continued tightening of the nut causes a slight tilting of the threads of the nut against those of the bolt. The tilting
20 thus produced causes the threads below the level of the slot to be distorted slightly and thrown out of continuity.

It will be appreciated that the tilting of the threads by the action or turning of the bevelled end 8 is permitted by the slot 9.
25

The practical embodiments can be carried into effect in other ways without departing from the general principles given.

30 Nuts made according to the invention in practice give an extremely efficient lock upon the bolt and do not work loose or slack back even under long and continued vibration. They can only be loosened when desired by the application of great force

whereas the normal tightening usually 35 given to ordinary nuts is sufficient to effectively lock the preferred nut on the bolt.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:— 40

1. A locknut comprising a nut of desired form having an exterior slot cut from the outer edge of the nut to the centre of the nut on one side thereof so that one complete 45 thread portion is cut away from that side of the nut and having a co-operating bevelled end on the exterior for the purpose set forth.

2. A locknut as claimed in Claim 1, having each end of the nut bevelled and a slot 50 substantially midway between each end.

3. A locknut as claimed in Claims 1 and 2 in which three complete threads are left between the slot and the bevelled end or ends of the nut. 55

4. Locknuts constructed and arranged substantially as described herein or substantially as described herein and shown on the accompanying drawing.

Dated this 8th day of June, 1927. 60

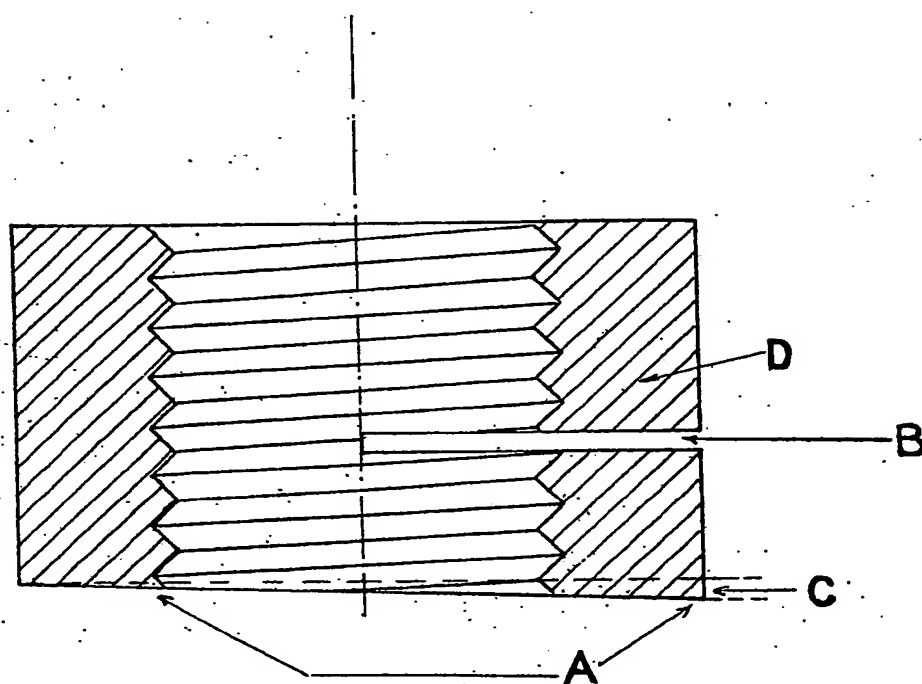
A. J. WIGGLESWORTH.

Reference has been directed in pursuance 61 of Section 7, Sub-Section 4, of the Patents and Designs Acts, 1907 and 1919, to Specifications Nos. 1791 of 1891 and 1141 of 1886 65

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[This Drawing is a full-size reproduction of the Original.]



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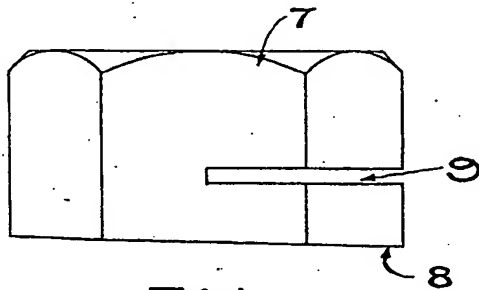


FIG. 1

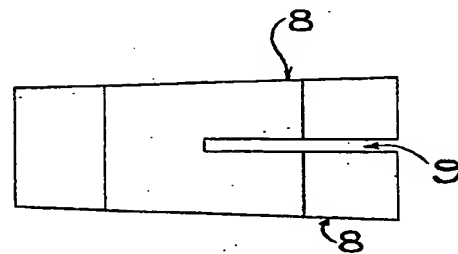


FIG. 4.

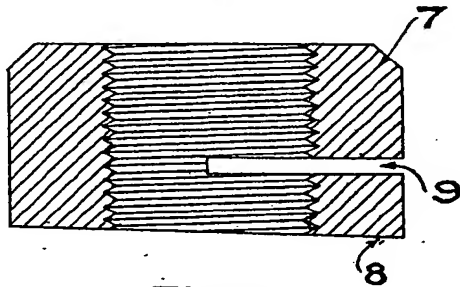


FIG. 2

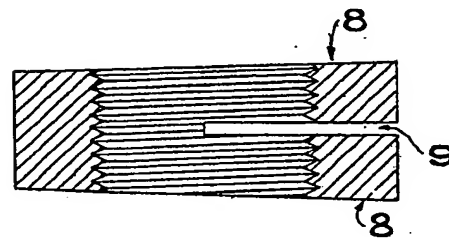


FIG. 5

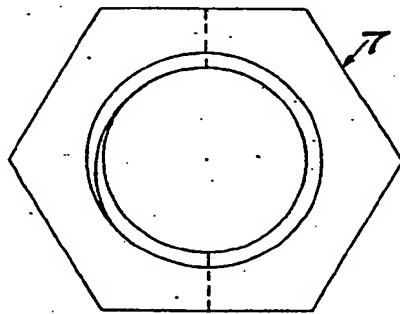


FIG. 3.

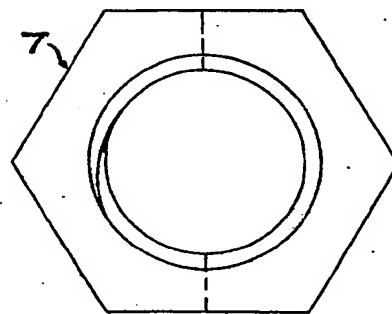


FIG. 6.

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